

**Interservice Radio Frequency Management School
336th Training Squadron (AETC)
Keesler Air Force Base, MS 39534-2235**

APR 2001

PHILOSOPHY

The philosophy of the group emerges from a deep concern for individual Armed Forces men and women and the need to provide highly trained and motivated personnel to sustain the mission of the Armed Forces. We believe the abilities, worth, self-respect, and dignity of each student must be fully recognized. We believe that each must be provided the opportunity to pursue and master an occupational specialty to the full extent of the individual, the Armed Forces, DOD, and the country. To these ends, we provide opportunities for individual development of initial technical proficiencies, on-the-job training in challenging job assignments, and follow-on growth as supervisors. In support of this individual development, and to facilitate maximum growth of its students, the group encourages and supports the professional development of its faculty and administrators, and actively promotes innovation through research and the sharing of concepts and material with other educational institutions.

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CHAPTER 1

ORIENTATION

OBJECTIVE:

1. Orientation

- a. Welcoming**
- b. Chain Of Command And Staff Introduction**
- c. Course Overview And Administration**
- d. Personnel And Equipment Safety/Occupational Risk Management (ORM)**
- e. Types And Uses Of Instructional Materials**
- f. Testing And Grading Procedures**
- g. Student Behavior/Cheating**
- h. Student Feedback Program**
- i. Air Force Fraud, Waste, And Abuse Prevention And Detection**
- j. Core Values**
- k. Benefits And Credits Awarded By Community College Of The Air Force (CCAF)**
- l. Conservation Of Training Materials, Resources, And Energy**
- m. Sexual Harassment, Professional Relationships, And Hazing**

INTRODUCTION

This document is intended to familiarize you with the structure of the course and the academic standards of the Interservice Radio Frequency Management School (IRFMS). This is general information and is not testable.

The focus for this area is to provide/inform you with:

- A. A description and the mission of the Interservice Radio Frequency Management School.**

- B. The location and hours of the school.
- C. The academic standards, method of instruction, conduct, and curriculum of the school.
- D. The schools accreditation, and organizational structure.
- E. Background information on the instructor staff.
- F. The uniform requirements to include the graduation ceremony.
- G. The items you need to bring to class.
- H. The Administrative finances support available at Keesler AFB.
- I. The DoD civilian personnel entitlements.
- J. The reporting and billeting requirements.
- K. The transportation available when you arrive.
- L. A quick reference of useful telephone numbers.

INFORMATION

The 336th Training Squadron, through the Interservice Radio Frequency Management School provides spectrum management education for Department of Defense (DoD) technicians, engineers, managers, and other interested individuals who require information on national, international, and DoD frequency management. The curriculum of the school provides maximum exposure to techniques common to DoD spectrum personnel. Emphasis is placed on national and international regulations and standards with particular impact on the global mission of US military forces. The course of instruction also covers various communications system concepts, with emphasis on the physical nature of these systems, rather than the system developmental theory.

MISSION

The mission of the Interservice Radio Frequency Management School is to provide the best fundamental and advanced spectrum management training for the Department of Defense and select foreign nations; producing spectrum managers for operational commanders to control and dominate the electromagnetic spectrum.

LOCATION AND HOURS

Keesler Air Force Base is the home of the 81st Training Wing, the largest electronics-training center in the world, situated within the city of Biloxi, Mississippi. Keesler is located on the Mississippi gulf coast approximately 40 miles west of Mobile, AL and 75 miles east of New Orleans, LA. The Interservice Radio Frequency Management School (IRFMS) course is normally conducted three times a year aboard Keesler AFB, Mississippi. Each class is approximately fourteen weeks in duration. The school is in the Vosler Academic Development Center, building 2602, D Street. Students attend formal classroom instruction nine hours each duty day and have every other Friday off due to a compressed work schedule.

ACADEMIC STANDARDS AND CURRICULUM

Several minimum academic standards are established for IRFMS. These standards are:

1. The minimum passing score for most examinations is 70 percent.
2. Failure to achieve a minimum passing score on any examination may be grounds for dismissal.

The schools' curriculum is based on requirements established by the Interservice Advisory Committee, consisting of representatives of the Joint Chiefs of Staff J6B, all military services, and the Joint Spectrum Center. The curriculum also meets the standards of USAF Air Education and Training Command (AETC). The goal of the school is to execute a curriculum satisfying the requirements of all branches of service, and DoD component agencies.

The guidelines used to carry out the goals of the school are in part:

1. Understand International and National Treaties, regulations, and restrictions as they apply to DoD.
2. Analyze electromagnetic compatibility to identify and minimize electromagnetic interference.
3. Calculate the communications parameters used to analyze system effectiveness.
4. Relate the creation of electromagnetic waves to the propagation characteristics to identify frequency-based problems.
5. Prepare and maintain frequency records and reports, using the Standard Frequency Action Format (SFAF).
6. During the tactical exercise, students will act as a Joint Task Force Spectrum Manager.

METHOD OF INSTRUCTION

Approximately sixty percent of the academic hours are spent using the lecture/discussion technique. The remaining is divided into practical exercise, video presentations, individual study, and computer lab. Video presentations and guest lectures are used to reinforce student knowledge and to present current information. Influential guest speakers are routinely invited to give students a glimpse of what can be expected within the spectrum management realm.

CONDUCT

Conduct at the school must always be above reproach. Military standards of conduct apply on and off duty, in personal behavior, and in the treatment of others. Failure to adhere to these standards may result in dismissal. Professional relationships are essential to the effective operation of the school environment. Classes start promptly as indicated in the student schedule, unless otherwise indicated. Profanity, harassment, or abusive language is never tolerated.

There are guidelines:

1. Classroom seating is predetermined.
2. Classroom and break room must be neat and clean.
3. Guest speakers will be afforded professional respect.

THE ELECTROMAGNETIC SPECTRUM MANAGEMENT CURRICULUM:

Course Material - UNCLASSIFIED

BLOCK I - Introduction to Electromagnetic Spectrum Management

Orientation
Computer Basics
Information Protection
Occupational Safety and Health
Introduction to Electromagnetic Spectrum Management
Publications
Regulation of Spectrum Management
Traffic Safety Course II, Local Conditions
Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK II – Mathematics of Spectrum Management

Mathematics Functions
Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK III – Communications Electronic Engineering Principles

Modulation Techniques
Receiver Sensitivity
Transmission Lines
Antenna Principles
Electromagnetic Wave Propagation
Electromagnetic Compatibility
Radiation Hazards (RADHAZ)
Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK IV – Spectrum Planning for High Frequency (HF) Systems

HF Fundamentals

HF Engineering

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK V –Spectrum Planning for Very High Frequency (VHF)/Ultra High Frequency (UHF) Systems

VHF/UHF Amplitude Modulated (AM) Air/Ground/Air Systems

VHF/UHF Frequency Modulated (FM) Ground to Ground Systems

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK VI –Spectrum Planning for Microwave, Line of Sight, and Troposcatter Systems

Microwave Antennas

Line Of Sight (LOS) Systems

Troposcatter Systems

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK VII – Principles of Communications Systems

Satellite Systems

Radar Systems

Navigational Aids (NAVAIDS)

Unmanned Aeronautical Vehicles

Communications Systems

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK VIII – Map Reading, GPS, and SPEED

Map Reading

System Planning, Engineering and Evaluation Device (SPEED)

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK IX – Principles of Electromagnetic Spectrum Administration

Bandwidth

Emission Designators

Radio Communications Service/ Station Classes

Standard Frequency Action Format (SFAF)

National and International Databases

Electronic Counter Measures (ECM)/Electronic Attack (EA)

Spectrum Certification Process

Joint Spectrum Interference Resolution (JSIR) Program

Navy Specific Spectrum Planning

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK X - ASPECTS

ASPECTS

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK XI – Introduction to Spectrum 21

Spectrum 21

Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK XII – Introduction to JACS

Joint Automated CEOI Systems (JACS)
Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK XIII – Spectrum 21 and JACS Performance Test

Spectrum 21 and JACS
Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK XIV – Principles of Joint Spectrum Management

Joint Task Force (JTF) Structure
Measurement and Critique

Course Material - UNCLASSIFIED

BLOCK XV – Final Performance Test, Tactical Exercise

Tactical Exercise
Course Critique and Graduation
End-of-Course Appointments
Measurement and Critique

SCHOOL ACCREDITATION

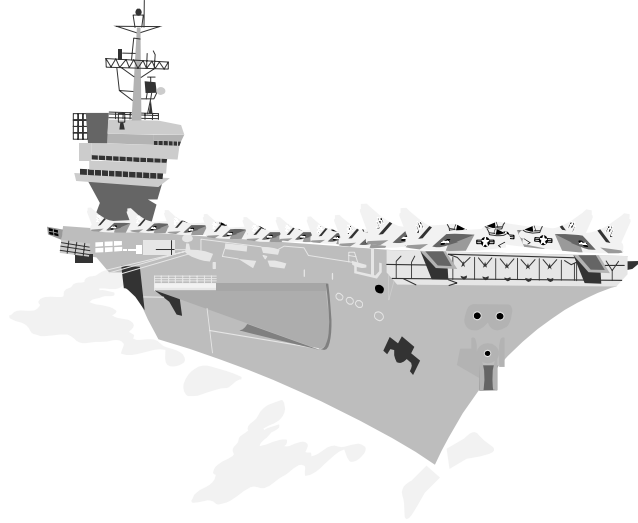
On 14 October 1976, the Policy Council of the Community College of the Air Force (CCAF) accepted the Electromagnetic Spectrum Management Course as an affiliated school. On 12 December 1980, CCAF received full collegiate accreditation from the Commission on Colleges of the Southern Association of Colleges and Schools. In 1997, the school was re-certified by CCAF and continues to enjoy accreditation as a CCAF affiliated school.

ORGANIZATIONAL STRUCTURE

The school is under the operational control of the United States Air Force Air Education and Training Command, and is administered under the 81st Training Wing, 336th Training Squadron, Keesler Air Force Base, Mississippi.

SCHOOL STAFF

To acquaint you with the staff, biographical sketches follow:



ITCM (SW) PAUL C. SIGMON “GO NAVY!”

Information Systems Technician

(Surface Warfare), Master Chief Petty Officer, U. S. Navy

Master Chief Sigmon was born in Washington D.C. in 1964 and grew up in the town of Herndon Virginia. Graduated from the University of Maryland in 1995 with a Bachelor of Science Degree majoring in Management Studies. Earned his Master of Business Administration (MBA) Degree with the William Carey College in May 2001.

In October 1983, Master Chief Sigmon reported for recruit training and Radioman Class “A” school at the RTC/NTC San Diego California. From January 1984 to September 1987 Master Chief Sigmon was assigned to the USS KITTY HAWK (CV-63). From September 1987 to March 1988 he attended Communications System Manager School (RMC-7) and Communications Systems Technical School (CSTS) in San Diego California. From March 1988 to July 1991 he was assigned to Naval Computer and Telecommunications Station (NCTS) Rota Spain and served as Technical Control Supervisor, Circuit Actions and Quality Control Petty Officer. From July 1991 to October 1991 he attended Interservice Radio Frequency Management School here at Keesler Air Force Base, Biloxi Mississippi. Then, from October 1991 to December he was assigned to Commander, United States Forces Azores (COMUSFORAZORES) where he worked as the Joint Frequency Management Officer (JFMO) Azores and as the Deputy Assistant to the Chief of Staff for Command, Control, Communications, Computers and Intelligence (C4I). From December 1995 to February 1998 he was assigned to the USNS BUTTE (T-AE 27), home ported out of Earle New Jersey, where he worked as the Officer in Charge (OIC) of the ship’s Military Detachment. Then from February 1998 to March 1999 he served at Naval Computer and Telecommunications Area Master Station, Europe Central (NCTAMS EURCENT) in Naples Italy as the Navy’s Regional Frequency Manager for all Naval Communications Shore Stations in Europe, and as the Leading Chief Petty Officer of Technical Control Division.



Master Sergeant Thomas G Besser
IRFMS MARINE CORPS INSTRUCTOR

Master Sergeant Besser enlisted in the Marine Corps on 12 May 1982 and attended recruit training in San Diego California. Upon completion of recruit training PFC Besser attended the Field Radio Operators Course at 29 Palms California. After completion of school, he was assigned to the 1st Marine Aircraft Wing Okinawa, Japan. In December 1983 he transferred to the Joint Communications Support Element, (JCSE) Quick Reaction Detachment. Following his assignment at JCSE Sgt Besser was assigned to the Joint Communications Unit (JCU), Joint Special Operations Command (JSOC), Ft Bragg North Carolina in 1986. In January 1990 Sgt Besser was assigned to the Marine Corps Communications and Electronics School as an instructor with the Radio Operators Training Section until 1993 when SSgt Besser left for an assignment with the 7th Communications Battalion Okinawa Japan until 1996. GySgt Besser was later assigned to the III MEF Special Operations Training Group serving as Communications Chief until 1999. GySgt Besser was assigned as the Frequency Manager for 29 Palms from 1999 to 2001. Presently MSgt Besser is assigned as the Marine Instructor at IRFMS Keesler AFB. MSgt Besser's professional military schools include:

Field Radio Operators Course, MCAGCC 29 Palms Ca 1982
US Army Airborne School, Ft Benning Ga 1983
US Army Jumpmaster School, Ft Benning Ga 1984
US Army SERE Level C High Risk, Ft Bragg Nc 1987
US Navy Cold Weather SERE/Advanced Evasion, Brunswick Me 1988
US Army Individual Terrorism Awareness Course, Ft Bragg Nc 1988
US Army Military Freefall School, Ft Bragg Nc 1989
US Navy Tropical/Desert SERE School, Antigua 1989
USMC Communications Systems Chief School, MCAGCC 29 Palms Ca 1993
Interservice Radio Frequency Management School, Keesler AFB 1999
USMC Operational Communications Chiefs Course, MCAGCC 29 Palms Ca 2000



Army Master Instructor,

Ernestine Cooper, Sergeant First Class

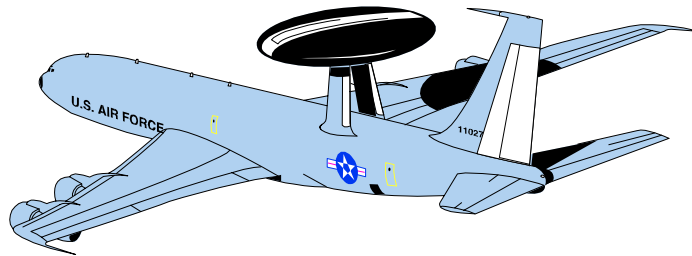
- 13 Jan 60 - Born in Newark New Jersey
- Moved to Panama City Florida where immediate family still resides - 5 years after birth
- 15 June 79 - After graduation from high school worked and took some college courses at Gulf Coast Community College, Panama City before entering the military on
- 15 Dec 81 - Basic Training, Ft. Dix New Jersey where after completion of training, spent another tour on camp as a Drill Corporal (08 Mar 82) aiding new recruits through training
- 10 April 82 - Basic Schooling (AIT) for 31M (Multi-channel communications operate) at Ft. Gordon Georgia
- 09 August 82 – First official duty station as a MCHAN COMM EQ OP
- 29 Dec 83 – Change of duty station to D CO 304th SIG BN Korea as a MCHAN COMM EQ OP
- 07 Jan 85- CO B 67th SIG BN, Ft. Gordon GA, MCHAN Team Chief
- 15 Dec 86 – 167th SIG CO 509TH SIG BDE, Italy, MCHAN Section Sergeant
- 09 Jan 89 – HQ & A 447TH SIG BN, Ft. Gordon GA, Instructor/Writer for AIT students
- 28 July 94 – 307th SIG BN, Korea, MCHAN Platoon Sergeant
- 08 Aug 95 – C CO 442ND SIG BN, Ft Gordon GA, Instructor/Writer at the Battlefield Spectrum Management Course
- 21 July 97 – Deployed to Sarajevo, BIH as a Theater Frequency Manager (CISCC HQ LANDCENT)
- 25 Nov 97- Re-deployed back to Ft. Gordon to complete tour
- 12 Oct 98 - HQ USEUCOM, ECJ6-F, Stuttgart, GE, as the Joint Frequency Manager
- 05 July 01 – En-route to Keesler AFB via Ft. Gordon

Education Military/Civ

- Rutherford High School
- Instructor Training Course (ITC)
- Georgia Mil College (AA SCI. Gen)
- Advance Non-Comm. Office Candidate Sch. (ANCOC)
- Joint RBECS Course
- Battlefield Spectrum Management Course (D9)

Graduate

- June 79
- March 89
- March 90
- Oct 92
- July 95
- Aug 95



**Air Force Instructor,
James A. Cutler, Technical Sergeant, USAF**

TSgt James Cutler enlisted in the Air Force on 14 August 1984 as an Air Traffic Control Radar Maintenance Technician. Upon graduation from technical school, he was assigned to Keesler AFB, MS. After three years, he was assigned to Shemya AFB, AK. After the one-year tour was completed, he returned to Keesler AFB, MS. In 1991, he transferred to Bitburg AB, GE, where he remained for two years. From Germany, TSgt Cutler returned to the United States in 1993, to Minot AFB, ND. In 1996, TSgt Cutler chose to cross-train into electromagnetic spectrum management. Upon graduation in 1996, he was assigned to Tinker AFB, OK. In 1998, TSgt Cutler volunteered for instructor duty with IRFMS and was assigned to the school in May 1998. TSgt Cutler is married to Caroline and has 6 sons, Shawn, Jeff, Cody, Calyn, Nicolai, and Noah.

**Department of the Air Force Instructor
Mr. Bart Reves**

Mr. Bart Reves was born in Greenwood, MS in 1949. He attended Mississippi State University and enlisted in the United States Air Force in 1969. In 1996, Mr. Reves retired from the Air Force. He holds an Associates of Science degree in Instructor Technology from the Community College of the Air Force, a Bachelor of Science degree in Sociology from the University of the State of New York, and a Master of Science degree in Education from National Louis University.

Mr. Reves began his military career with a year of training at Keesler AFB, MS as a Training Devices Technician. His first assignment was with Strategic Air Command at Det 8, Richmond Bomb Plot, KY, in 1970. He was stationed at Mather AFB, CA in 1975 and transferred overseas to Anderson AF, Guam in 1979. Returning to the states in 1982, Mr. Reves was assigned to Griffiss AFB, NY, where he worked on the newest training device for the B-52 Weapon System, the Weapon Systems Trainer.

In 1984, Mr. Reves was selected for special duty as a Professional Military Education (PME) instructor and reassigned to the Air Force Communications Command (AFCC) NCO Academy at Keesler AFB, MS. He was subsequently selected to be the Commandant of the Keesler NCO Leadership School in 1986 and then after promotion to SMSgt returned to the AFCC NCO Academy as the Director of Education. After promotion to CMSgt, Mr Reves was selected as the Chief, Enlisted PME Programs for Air University at Maxwell AFB, AL in 1993.

After retirement, Mr. Reves worked as a Vocational Counselor in Yuma, AZ before moving to Ansbach, Germany and going to work with the U.S. Army as the Director of the Army Community Services Office, 11AV Regiment, Illesheim, Germany. Upon returning from Germany, Mr. Reves worked for the U.S. Navy at Pascagoula Navy Base in the Family Services Center and the Navy College Office. Mr. Reves was selected to be an instructor for the Interservice Radio Frequency Management School in January 2001, and graduated from the course in class 01A.

Mr. Reves and his wife Carolyn reside in Vancleave, MS. She is the Station Manager for the American Red Cross at Keesler AFB, MS.

GRADUATION AND DRESS REQUIREMENTS

The graduation ceremony is a mandatory military function; attendance by dependents, other than a spouse is not encouraged. An invited guest speaker from the spectrum management community normally discusses items of interest and awards diplomas at the graduation luncheon. In addition to academic awards, the school recognizes the student who demonstrates exemplary leadership, devotion to duty, and willingness to help others with the Major Errol D. Champagne Award.

Army members are required to have their Class A, Class B, and BDU uniforms available. Uniform for the graduation ceremony will be Class A or Class B. Uniform for the classroom is normally the BDU's.

Air Force members are required to have their BDU, short sleeve blues and service dress uniforms available. Uniform for the graduation ceremony will be short sleeve blues or service dress. Uniform for the classroom is normally the BDU's.

Marine Corps members are required to have their Service "A", "B", and "C" uniforms. In addition, they must bring Dress Blue "C" and "D" uniforms. Finally, they must also bring their

Camouflaged Utilities uniforms. The uniform for the graduation ceremony will be either Service "A" or "C". The uniform for the classroom will normally be the camouflaged utilities.

Navy personnel must bring all prescribed seasonal uniforms. If the time of the year will overlap seasons, they must bring both whites and blues. Uniform for the graduation ceremony will be in the prescribed seasonal uniform. The uniform for the classroom will normally be the work uniform E-7 and above khakis, E-6/E-5's dungarees.

Civilian personnel wear appropriate office dress in the classroom. For the graduation ceremony, men will wear a coat and tie (semi-formal) and the women will wear an appropriate dress (semi-formal).

ITEMS TO BRING FOR CLASS:

- Pens, pencils, and notebooks (lots of note taking materials).
- One box of 3.5" floppy disks, double sided, high density (DSHD).
- Highlighting markers (not black) and colored pencils.
- ***SPILL PROOF*** cup for use with **any** liquid in the classroom. A 30-cup coffee urn is available; students must supply coffee and condiments.
- 3 Ring Binder (2 or 3)

The school will supply calculators, computers, and rulers for the student's use while assigned to the school.

ADMIN/FINANCE SUPPORT

The Marine Corps, and Navy have detachments aboard Keesler provide personnel support functions. The base finance office provides services to the Air Force only. Army personnel will use the Army Instructor and their home unit for support. International students will have support thru the Air Force instructor and the International Student Management Office.

There is presently no agreement between the Army and the Air Force to provide financial support while TAD/TDY to Keesler. Students from the Department of the Army, must make arrangements with their servicing pay office to make sure their required funds are issued in advance or can be timely received via electronic transfer or credit card.

There is presently no agreement between the Marine Corps and the Air Force to provide financial support while TAD/TDY to Keesler. Students from the Marine Corps, must make arrangements with their disbursing office to make sure their required funds are issued in advance or can be timely received via electronic transfer or credit card. If the student has not made prior arrangements through their parent command then the Marine Corps Detachment can send a partial settlement claim every 30 days to Kansas City for personnel in a TAD status.

There is presently no agreement between the Navy and the Air Force to provide financial support while TAD/TDY to Keesler. The disbursing office at the Seabee Base at Gulfport, CBC, supports Navy personnel attending the school.

DoD CIVILIAN PERSONNEL ENTITLEMENTS

The following entitlements apply if DoD civilian employees are billeted on base. Keesler Civilian Personnel Office recommends civilian travel orders be authenticated by the Billeting Office to show use of on-base quarters.

Medical: (AFR 168-6) Out Patient Emergency Hospitalization

Base Exchange: (AFR 147-14) limited

Theater: (AFR 34-32) All

Morale, Welfare & Recreation: (AFR 34-3) All

Open Mess: Dependent upon grade

REPORTING / BILLETING INSTRUCTIONS

Students reporting to the Electromagnetic Spectrum Management Course should follow the procedures outlined in their travel orders. If directed to report to any specific activity for record purposes, follow all instructions.

Students must **REPORT TO THE SCHOOL ONE-DAY BEFORE THE CLASSES START DATE**, in Bldg 2602, room 119 (Vosler Academic Development Center). If any difficulties are encountered before reporting, contact your service representative commercial, (228) 377-0089 or DSN 597-0089 for assistance.

Army Students do not need to report to the Army Detachment. All check-in procedures are accomplished through the Army instructor in Bldg 2602, room 119 (Vosler Academic Development Center) **0800 THE DAY BEFORE THE FIRST DAY OF CLASS**. Additional information concerning reporting instructions can be obtained from your Army representative.

Marine Corps students are required to report to the Marine Corps Detachment Bldg 7001 in Service "A" uniform by **0800 THE DAY BEFORE THE FIRST DAY OF CLASS**. After reporting into the detachment all Marine Corps students, will report to the Marine instructor in Bldg 2602, room 119 (Vosler Academic Development Center) by 1000. Additional information concerning reporting instructions can be obtained from your Marine representative.

Navy students must report to Naval Technical Training Unit (NTTU) located in Stennis Hall building 4331 by **0800 THE DAY BEFORE THE FIRST DAY OF CLASS**. After reporting into NTTU, all Navy students will report to the Navy instructor located in Bldg 2602, room 119 (Vosler Academic Development Center) by 1000. Additional information concerning reporting instructions can be obtained from your Navy representative.

Air Force Students do not need to report to the training squadron immediately. Check-in procedures are accomplished through the Air Force instructor located in Bldg 2602, room 119 (Vosler Academic Development Center) **0800 THE DAY BEFORE THE FIRST DAY OF CLASS**. Once all of the Air Force students have arrived, the Air Force instructor will accompany the students to the training squadron to complete the check-in procedures. Additional information concerning reporting instructions can be obtained from your Air Force representative.

Civilian / DoD Students do not need to report to the training squadron. Check-in procedures are accomplished through the School located in Bldg 2602, room 119 (Vosler Academic Development Center) **0800 THE DAY BEFORE THE FIRST DAY OF CLASS**. Additional information concerning reporting instructions can be obtained from the course director.

International / NATO Students do not need to report to the training squadron. Check-in procedures are accomplished through the International Office located in Bldg 2004 room 179 by **0800 THE DAY BEFORE THE FIRST DAY OF CLASS**. After reporting into International

Office, all International / NATO students will report to the Course Director located in Bldg 2602, room 119 (Vosler Academic Development Center) by 1000. Additional information concerning reporting instructions can be obtained from the course director.

Students will report to Muse Manor, Bldg 2101, for billeting. It is recommended that students make advance reservations before arrival. Reservations are made by calling commercial, (228) 377-9986/3774 or (DSN 597-xxxx). Joint Service Regulations require you to report to the Housing Referral Office before you make any commitment for housing in the community. Students who bring their families with them are required to make their billeting arrangements.

TRANSPORTATION

Students arriving by commercial air transportation at New Orleans International Airport, Mobile Airport, or Gulfport Municipal Airport should bring money for the cost of local ground transportation (recommend \$60.00 for New Orleans or Mobile and \$20.00 for Gulfport airport arrivals).

Students who drive POVs should bring their certificate of ownership, title, and proof of insurance with them. If the vehicle does not already have a DoD sticker, they are required to report to the Sablich Center vehicle registration office to register their vehicle on base.

QUICK REFERENCE TELEPHONE NUMBERS

Frequency Management School			
Instructor Supervisor, IRFMS	377-0626		
Information Management (ADMIN)	377-0089	Fax 377-5066	
Army Instructor	377-0087		
Marine Instructor	377-0625		
Navy Instructor	377-0626		
Air Force Instructor	377-3096		
Air Force Instructor	377-5067		
Civilian Instructor	377-5047		
International Office			
International Office	377-2921	Fax 377-1190	
International Office	377-3992		
International Office	377-4228		
Other Points of Interest			
Auto Hobby Shop	377-3872	Library	377-2181
Base Exchange	435-2216	Enlisted Club	377-2958
Barber Shop (O-Club)	379-5149	Officers Club	377-2219
Barber Shop (BX)	436-4181	Pass & ID	377-3893

Bowling Alley	377-2817	Service Station	432-2404
Commissary	377-4468	Theater	377-4281
Chapel	377-4410	Transportation Office (Base Taxi)	377-2430
Credit Union (KFCU)	385-5500	Sick Call Appointments	1-800-700-8603
Dental Clinic (Apt)	377-4510	Snack Bar (Flight Diner)	435-3551
Emergency Room (Ambulance)	377-6555	VA	377-2631
Gymnasium (Blake)	377-4385	Visiting Officer Lodge	377-2420
Gymnasium (Dragon)	377-4409		

Keesler AFB: 228-377-XXXX

Defense Switched Network (DSN) number for Keesler AFB: 597-XXXX

Keesler AFB on base numbers: 7-XXXX

DSN access from Keesler telephones is: 94 then the DSN number

Off base local calls from Keesler telephones is: 99 then the local number

Emergency number 911

STUDY SKILLS

Teaching study skills is intended to familiarize you with good listening habits, proper note taking methods, and tips on how to successfully take a test. This Spectrum Management technical course may be challenging and since some students have not been in a class room environment for some time, this may add to the challenge. The first element in developing good studying skills is listening.

Listening

Hearing is not listening. People hear, often without listening, whenever sound waves strike their eardrums. Frequently, we do not remember what we hear because we do not listen. Almost everyone is embarrassed by not remembering the name of a new acquaintance due to a failure to listen when they were introduced. Even if one remembers, the person does not necessarily get the most from listening. Donkeys are not rich simply because they carry gold on their backs, nor are people wise simply because they have facts memorized. Facts, memorized without an understanding of their significance are as worthless to people as gold is to a donkey. In a broad sense, listening means hearing, comprehending, and remembering. To do this, people must concentrate on what they hear. They must be willing to put effort into the listening process. By definition, concentration is "close mental application" or "exclusive attention." What can people do to channel their attention? The secret lies in forming good listening habits.

Get ready to listen. Listening requires physical and mental preparation. The physical preparation for listening can be compared to the efforts of catching a plane. If people expect to be passengers on a plane departing at 2000 hours, they must check baggage, find seats, fasten safety belts, and be waiting takeoff before 2000 hours. The same is true in the listening situation. First, listeners must check their baggage, put away newspapers, books, and other materials. Next, they must comfortably seat themselves before the speaker begins. They should prepare to listen to the speaker by mentally "tuning-out" distractions such as noise or minor physical discomforts. They should be physically relaxed but mentally alert, with pencil and paper at hand for taking notes. Only then are they ready to travel along with the speaker.

If the listener and the speaker are in the same room they cannot travel far from each other. Yet, despite their physical proximity, the listener and the speaker do not necessarily travel in the same channels of thoughts or ideas. By failing to listen to the speaker's opening remarks,

members of an audience miss the basic structure the speaker will use to build the important points of the topic.

Physical preparation is not enough; mental preparation is also essential to good listening. Listeners should be ready to "tune-in" on the speaker's mental wave length. How do they prepare themselves to do this? They start by reviewing their knowledge of the subject area and then trying to imagine what the speaker will say. Just as they would study a map before starting on a trip into an unfamiliar area, they study a mental map of the area the speaker is likely to take them. Alert listeners will review schedules or other program data which might give them preliminary information about a speaker's topic or lesson. They find material on the subject of the lecture and read it. If they already know something about the topic, they should think about it and consider what they would say if they were the speaker. This part of the preparation helps listeners recognize the core of experience they have in common with the speaker. By taking to the lecture as much knowledge of the subject as possible, they increase the probability of valuable two-way communication.

Take responsibility for comprehending. Frequently, speakers will have listeners in their audiences whose attitudes speak for them: "Here I am; teach me-if you can!" These listeners believe knowledge is poured into them as water is poured into a jug. They will not get the full benefit of any lecture or lesson until they learn that a successful listening-learning situation demands something of the listener as well as the speaker. Speakers frequently use examples to support points they wish to stress. Listeners who feel responsible for comprehending look for similar examples within their experience and apply the point to themselves or to their jobs.

Another way to increase comprehension is to rephrase ideas. In describing poor reading habits, a speaker might say, "The reader in this example has too many fixations per line." Listeners might rephrase the statement: "This reader allows the eyes to stop too many times on one line of type." Rephrasing in this way helps them understand and retain the speaker's words into a vocabulary which they are more familiar.

Listen to understand rather than to refute. Critical listening is a good practice, but it is not achieved by criticizing the speakers' thoughts before they have finished. Silent argument with speakers while they are speaking can be a waste of time. Thoughtful listeners will analyze but not mentally argue with teachers or lecturers during the presentation. Unless they honestly attempt to get the speaker's message, listeners cannot be well enough informed to evaluate the ideas intelligently. Listeners should listen and wait; they should try to understand first and evaluate second. Some or all ideas may deserve questioning and testing, but the testing should be done after a speech or lesson is finished. Conversely, responsible listeners may find no disagreement exists.

Control your emotions. Listeners should not permit emotional blocks to develop between themselves and the speaker. How can listeners be unbiased? If, for example, they are annoyed by a speaker's manner, how can they remain objective about the speaker's ideas?

By isolating the source of their annoyance; the speaker's vocabulary, dress, or personal mannerisms and by analyzing the reasons for their negative emotional responses to them, they can often minimize their effects. Intelligent listeners do not permit emotional blocks to prevent understanding of a speaker's ideas. Actually, responsive listeners try to help speaker's rather than to react unfavorably to them. Listeners can assist speakers merely by displaying an overt interest.

Sometimes, certain words trigger certain emotions. Some terms, such as, "Blondie," "Socialist," "Automation," and "collector of internal revenue" are emotionally loaded. Everyone

has experienced emotional blocks upon hearing certain words. Listeners wishing to profit from their listening experiences should make a list of words that annoy them emotionally. By identifying and understanding these words as blocks to communication, they can gradually allow themselves to respond to a speaker's ideas rather than their vernacular or vocabulary.

Listen for main ideas. It is possible to become too involved in details. People who boast, "I listen for the facts," may actually be poor listeners. By concentrating exclusively on individual supporting points, they may miss the main ideas. Fact A, Fact B, and Fact C may be interesting, but the speaker's reasons for offering these facts may be to derive an important generalization from them. Realizing this, alert listeners can train themselves to distinguish between main thoughts and the less important supporting ideas.

How have speakers organized their main points? What organizational patterns have they used? Do they present main points and then support them, or do they use the opposite approach? Both approaches are effective, and both are commonly used in speeches. Listeners must look for the relationship of examples, comparisons, and testimony to the ideas they support. If listeners have previewed the subject matter, the listening task is easier.

By listening for the main ideas of speakers, people may increase their knowledge and understanding. Most people want to know more about many subjects than they have time to learn through personal research. By listening intelligently, listeners can benefit from the research, experience, and thinking of knowledgeable speakers from a wide variety of fields.

Be mentally agile. Concentrating through a speech is a challenge, because people do not think and speak at the same rates. People normally think much faster than speakers can possibly talk. This rate differential gives the listener's minds time and opportunity to stray from the speakers' subject. Listeners with disciplined minds may use this spare time to review what the speaker has said and to predict what they will say. In doing this, they profit from two practices essential to learning: Mental activity and repetition. Mentally agile listeners have ample time mentally, to repeat, forecast, summarize, and rephrase the speaker's remarks. This practice increases comprehension and aids retention.

Take notes. Comprehension and retention, of students taking notes, are usually better than those of students who do not. Listeners should use a note taking system that works for them. If they follow a system and establish the habit of reviewing their notes, comprehension, and memory will improve.

The suggestions for getting ready to listen also apply to taking notes. Listeners should arrive at the lecture hall or classroom in time to have their materials ready before the speaker begins. If you use a separate sheet of paper or note card for each presentation, your notes will be easier to use later. By using only one side of the paper and leaving enough marginal space, you can easily make clarifying notes you may wish to add later from other sources. One efficient system is to use a loose-leaf folder with separate sections for each topic or area covered in a lecture series.

Notes should include the speaker's main ideas and enough supporting details to make the main ideas clear. Yet, listeners cannot afford to let the note taking process interfere with their understanding of what the speaker is saying. The main function of taking notes is to aid in reconstructing the oral communication upon its conclusion. Often it is helpful to use abbreviations to jot down key words, rather than complete sentences. When listeners try to take down a speaker's exact words, they risk losing the continuity of their thoughts and, therefore, the purpose of the lecture. In only one instance is it wise to take verbatim notes: for purposes of clarity. Write definitions of key words down just as the speaker expresses them.

Listeners should watch for "road signs" indicating the speaker is moving from one main idea to another: Such transitions are "another point is" and "in contrast to what I have just said." Notes should be as brief, yet easily understandable. Each note should help recall one of the speaker's ideas. Good notes actually outline the speech.

Listeners should review and expand their notes as soon after a speech as possible. This review permits the listeners to "relive the experience," thereby strengthening their memory of the most important ideas.

Taking Notes

Taking notes is not simply writing down everything spoken. There are several elements to taking notes. First is student participation: Anything you can do to generate definite mental action while listening or reading will help you to achieve affective learning. One device is taking notes. If you reword what the speaker or author is saying, you are mentally reacting to what you hear or see. Taking notes is one of the best devices for incurring aggressive mental reaction to what your eyes and ears are receiving. Learning does not take place unless there is mental activity on the part of the listener or reader. You can follow a lecturer by noting his elaboration of different points and thinking of possible improvements you would make on his presentation. This keeps you mentally alert, which is the essence of learning. Another technique is to ask yourself, "What should I get from this chapter or this lecture?" Formulate questions you feel should be answered in the process of the discussion and look for the answers to these questions. This technique gives you something definite to accomplish as a result of your listening and reading keeps your mind, as well as your eyes and ears, active in the process of learning.

Aid in retention. After getting the meaning of what the speaker or writer has presented, you should condense this into your words. You should write down just key words, because if you try to write phrases or sentences, you will miss much of the speaker's presentation. You can not listen, think, and write at the same time. During your review of the notes, your words will have more meaning than those of the speaker or writer. Then too, this practice is a test of whether you understand what the speaker or writer presented. To rephrase something in your words requires some understanding of the materials. Rephrasing in your words is a kind of self-recitation which allows you to do some extra thinking about the materials. Thinking increases understanding. The result is your learning will be more useful and easily retained.

Study reference and research. Learning in any course or school is a balanced process. This means getting the maximum from any course or school requires knowledge from the classroom and from written materials. Taking notes tends to bring together what you learned in the classroom and what you understood from reading and studying. The result is a compact package of information or notes easily accessible for reference. This reference material can be rewarding immediately before an examination period or class discussion. You will then have all the important information you need right at your fingertips. You eliminate the problem of researching volumes of material in a library or the inconvenience of carrying volumes of material to class with you. Remember, you cannot re-read all of the material, and even if you could, it could prove to be a waste of time.

How To Take A Test

There are many factors effecting passing or failing a test. Some of these factors are listed below. Read them carefully and evaluate yourself against them. You may discover one or more of them apply to you. Once you have isolated a weakness, it should not be too difficult to correct the weakness.

Do not be afraid of the test. You may have developed a fear that the test is difficult and you are likely to fail. Your unfound fear could cause you to make errors. Fear is defined as False Evidence Appearing Real.

Mental block. When you enter the test room, you do not have the power to concentrate on the instructions or the questions. You are beaten before you begin.

Over confident. You pass phase tests with flying colors. You breeze through the test and finish before others start. Then -- the news -- you failed. You did not concentrate; you did not take your time. It's like food, you did not digest the question correctly.

Misleading questions. Intentionally or unintentionally, tests contain this type of question. These questions are easy to recognize if you concentrate and read carefully. These questions should be no more difficult for you than others.

Two answer choices are correct. Occasionally you will encounter a question where you believe two answers are correct. The fact remains, only one answer is correct, so read the question again and select the best answer choice.

You become irritated or mad. During the first few questions you decide the test does not reflect the subject area taught. It is outdated and does not fit the lesson or the material you have been studying. What do you do? Well, do not let your irritation cause you to make more errors than your lack of knowledge forces you.

You are a Ball-of-Fire on the job but cannot take a test. You have never been more wrong. If you are a go-getter on the job, you can be a whiz with a test. All you have to do is know the answers to the material covered.

A good memory. Do not let your memory play tricks on you; it can cause you to make mistakes, especially when you are on the 25th question and are still remembering how difficult the 10th question was. Concentrate on the question you are working on, not the one you just passed.

Curiosity. The person on your right seems to be moving right along; he is not chewing his pencil and has not looked up once. He must be doing real well! He probably is; at least he is concentrating on the test.

Fifty questions, forty-nine answers: You have finished a 50-question test, but your answer sheet shows only 49 answers. You missed or skipped a question, but where? If you are lucky, you can spot the error. How can you correct it? Check with the test monitor and ask for help. He will probably give you another answer sheet and advise you to check your position on the test against the answer sheet every ten questions until you find the skipped question. Then transpose your responses correctly to the new answer sheet, remember to neatly erase.

Taking too much time per question. Some questions are difficult even for the most competent student. You are having trouble with them. Pass over the hard ones and come back to them after you have finished the remainder of the test. Then concentrate on each and give your best guess. There is not a penalty for guessing.

Elimination Process. When you answer a multiple choice question, you should always do it by elimination. Eliminate answers you believe could not possibly be correct. Try to eliminate at least two, this will leave two answers. Then if you must guess, you have a 50-50 chance of answering correctly.

Free Questions. Some tests will have one or two free questions with correct answers clearly indicated in the stem of the question. If you mark any other answer, it will be graded as an incorrect answer. It may surprise you to know these free questions are frequently missed -- not by you, of course, but by others.

First impressions. First impressions are frequently correct, so when you read the questions and look at the answers, place the eraser of your pencil on the answer you think is correct and proceed from there, by using elimination.

Two questions alike. You are on the 25th question and it was so easy. However, somewhere previous there was one question, almost like it, you could not complete. What do you do? Proceed with the test and if time permits, after you answer all the questions, try to find the one you missed. Do not waste too much time on one question; it is not worth it.

Not enough time or too much time for test. When you reach the mid-point of the test, check the time you have used against the time left, and the number of questions left, then speed up or slow down as needed to answer all questions, and use the allotted time. If you are running out of time, pass quickly over the harder questions. If you have extra time, concentrate or recheck the harder questions.

Be Alert When Testing. Get plenty of sleep and rest the night before a test. Misuse of alcohol or a lack of sleep could cause you to make errors during the test.

You could have passed, but did not care. This is an excuse crutch for some and a fact for others. In either case, the person may be suffering from a weakness centering in the head, heart, and backbone.

Pride of accomplishment. Take pride in your ability to pass the test no matter how difficult it may seem.

Am I fully prepared to be tested. Only if you have studied and fully understand all the available references. Be honest, if you do not clearly understand your instruction you are not prepared to attain a passing score. Remember, there is no reason for you to fail your test if you have prepared yourself. Do not be half prepared. Do not trust totally in "luck."

Last minute cramming. Prepare in advance and allow time for rest and relaxation so you may enter the examination room in the best mental condition. An all-night cramming session before an examination is as senseless as a mile training run just before a 100 meter dash.

Do not argue. Consider each question in the light of what you have studied or heard in the class; discuss personal opinions with your instructor, not with the examination book.

Student Notes:
